The Validation of the Administrator Dispositions Index

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Abstract: The purpose of this study was to validate the instrument, Administrator Dispositions Index (ADI), that measures the dispositions of effective school leaders. The ADI could be used to assess administrator candidate dispositions and to integrate dispositions of effective school leaders into the curricula of administrator preparation programs.

The *No Child Left Behind Act* signed into law in 2001 requires school districts to hire highly qualified school leaders who possess the necessary knowledge, skills, and dispositions to ensure that all children learn (Center on Education Policy, 2002). Administrator preparation programs have traditionally focused on developing candidates' knowledge and skills in areas such as law, finance, personnel, management, and evaluation (Daresh & Playko, 1992). Preparation in the traditional curricula is important, but research indicates that the development of the dispositions of effective school leaders ultimately may determine if candidates succeed as school leaders (Daresh & Playko, 1992; Morris, 1999). While there are tests and instruments available to measure candidates' knowl-

edge and skills in educational administration, a review of the literature failed to find an instrument that measures the dispositions of effective school leaders. The purpose of this study was to validate a quantitative instrument that measures the dispositions of effective school leaders.

Dispositions Defined

Dispositions have been defined as values, commitments, ethics, or beliefs that are internally held and externally exhibited (Cudahy, Finnan, Jaruszewicz, & McCarty, 2002). According to the Standards for Advanced Programs in Educational Leadership (National Policy Board for Educational Administration, 2002), school leaders should possess the necessary dispositions to work effectively with students, families, and communities. Fullan (2002) refers to these dispositions as *moral purpose*, which is "social responsibility to others and the environment" (p. 17). Research suggests that several key dispositions of effective school leaders include caring for others, strength in making decisions and getting things done, fairness, being open to alternatives, and involving others (Wildy & Louden, 2000). As a start in the integration of dispositions into the curricula of administrator preparation programs, the dispositions of effective school leaders must be identified and aligned with professional standards (Council of Chief State School Officers, 2003; National Association of State Boards of Education, 1999).

Professional Standards

The Administrator Dispositions Index (ADI) was developed by aligning the ADI items with the dispositions of effective school leaders as specified under the Standards for Advanced Programs in Educational Leadership (Council of Chief State School Officers, 2003; National Policy Board for Educational Administration, 2002). The Standards include:

· Standard 1: Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by facilitating the development, articulation, implementation, and stewardship of a school or district vision of learning supported by the school community.

· Standard 2: Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by promoting a positive school culture, providing an effective instructional program, applying best practice to student learning, and designing comprehensive professional growth plans for staff.

· Standard 3: Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by managing the organization, operations, and resources in a way that promotes a safe, efficient, and effective learning environment.

· Standard 4: Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by collaborating with families and other community members, responding to diverse community interests and needs, and mobilizing community resources.

· Standard 5: Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by acting with integrity, fairly, and in an ethical manner.

· Standard 6: Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context. (National Policy Board for Educational Administration, 2002)

Research Questions

The following research questions were addressed during this study: (1) What unique constructs are measured by the dispositions of effective school leaders that align with the Standards for Advanced Programs in Educational Leadership (National Policy Board for Educational Administration, 2002)? (2) Can these constructs be measured with an acceptable degree of reliability and validity? (3) Are school leaders' perceptions of their commitment to the dispositions of effective school leaders related to their demographic characteristics?

Method

The procedures used to validate the ADI included an item development phase as well as procedures to provide evidence of the ADI's content and construct validity and an estimation of its reliability (see Table 1). The procedures used in this study replicated those used by Schulte, Edick, Edwards, and Mackiel (2004) in the development and validation of the Teacher Dispositions Index.

Item Development

Items were adapted for the ADI from the following sources: the Council of Chief State School Officers (2003) and the National Association

Volume 17, Fall 2005

77

of Secondary School Principals (2001). In total, 46 items were developed from the existing sources and aligned with the Standards.

Validation of the ADI

Content Validity

A group of 12 persons with experience in educational leadership reviewed the 46 ADI items to provide evidence of the ADI's content validity. The content validity panel included five professors who teach educational administration courses at a Midwestern metropolitan university and seven administrators employed in the following positions: assistant principal (2), principal (4), and assistant superintendent (1). The reviewers' years of experience in the field of education ranged from 10 to 40 years with a mean of 20.36 years ($SD = 11.17$).

The reviewers were asked to rate the appropriateness of the 46 ADI items in measuring the dispositions of effective school leaders broken down by Standard on a 3-point scale (1 = not appropriate, 2 = marginally appropriate, and 3 = very appropriate). The reviewers were asked to provide ways to improve the items that they rated "1" or "2", if possible.

The appropriateness ratings of the 12 reviewers were analyzed in order to determine which items to retain in the ADI. Based on the input provided by the reviewers, items with ratings below 3 were reworded. Of the original 46 ADI items, 5 items were reworded, 1 item was deleted, and 2 new items were added based on the reviewers' comments, resulting in a 47-item ADI.

Participants

To further validate the ADI and to provide an estimation of its reliability, the 47-item ADI was distributed to practicing administrators in the State of Nebraska and graduate students pursuing Master's degrees in educational administration. There were 249 practicing administrators and 52 graduate students in the sample with 31% males and 69% females. The majority of the participants were teachers (15%), principals (52%), and superintendents (26%). Their ages ranged from 24 to 68 ($M = 46.84$, $SD = 9.46$). Their years of experience in the field of education ranged from 2 to 43 ($M = 22.51$, $SD = 9.65$) with their years of experience in their current educational role ranging from 1 to 38 ($M = 5.37$, $SD = 2.34$). The participants worked at both public (93%) and private (7%) schools or school districts with all levels represented: elementary (29%), middle/junior high (9%), high school (24%), K-8 (4%), K-12 (17%), and central office (17%). The classification of the participants' school districts from largest to smallest in terms of student enrollment included: 850 to 1,950 students (31%), 240 to 849 students (14%), 85 to 239 students (30%),

and less than 85 students (24%). (Percentages do not add to 100 because of rounding.)

Data Collection Procedures

The practicing administrators were surveyed via an on-line survey. The graduate students were surveyed via a paper survey in their practicum course, which is typically the last course in their Master's degree. The survey information included (a) a cover letter that explained the purpose of the study and informed the participants that participation was voluntary and that responses would be anonymous, (b) demographic questions used to describe the participants, (c) the 47-item ADI, and (d) an open-ended item that asked for any additional comments about dispositions. Before distributing the survey information, Institutional Review Board approval was received for the study. Participants were asked to respond to the ADI items by giving their perceptions of how committed they are to the ADI dispositions in their role as a school leader using a response scale ranging from "1" not committed to "5" strongly committed.

Data Analyses

The following statistical analyses were conducted to investigate the construct validity and reliability of the ADI:

1. The construct validity and dimensionality of the ADI were evaluated with exploratory factor analyses using a principal axis factoring method followed by a varimax rotation of the number of factors extracted. The principal axis factoring method was used rather than the principal components method because the intent was to investigate common variance in order to determine the number of dimensions that the ADI measured (Kachigan, 1991).

2. The reliability of the ADI subscales was estimated using coefficient alpha, Cronbach's alpha (Crocker & Algina, 1986).

3. The participants' perceptions of their commitment to the dispositions of effective school leaders were summarized by calculating mean scores for each of the ADI subscales.

4. The relationship between participants' scores on the ADI subscales and their demographic characteristics was investigated using correlation analyses, independent *t*-tests, and one-way analyses of variance (ANOVAs). Because multiple statistical tests were conducted, a .01 level of significance was employed to control for Type I errors.

Results

Factor Analysis

The initial factor analysis indicated that a two-factor solution fit the data. The scree plot provided visual confirmation of the initial eigenvalue information. The first factor had an eigenvalue of 17.57 and accounted for 37.38% of the total variance. The second factor had an eigenvalue of 2.22 and accounted for 4.72% of the total variance. The two factors accounted for approximately 42% of the variance in the ADI items.

Using a factor loading cutoff value of .40, the factor loadings for the two-factor solution revealed that the ADI items measured a student-centered dimension and a community-centered dimension (see Table 1). The student-centered dimension focuses on students and the learning environment. The community-centered dimension focuses on school leaders' interactions and relationships with members of the school and surrounding community. Eight of the original 47 ADI items were removed because they loaded on both factors. The removal of the items was necessary because the goal was to construct two relatively independent composite scores. Thus, the results of the factor analysis yielded a 39-item ADI that measured two unique constructs.

Reliability Analysis

Cronbach's alpha was calculated for each of the two ADI subscales. One item was removed from the student-centered subscale because Cronbach's alpha increased slightly when it was removed. The reliability estimate for the 17-item student-centered subscale was .92. The mean of the corrected item-total correlations was .64 (SD = .07).

Two items were removed from the curriculum-centered subscale because Cronbach's alpha increased slightly when they were removed. The reliability estimate for the 19-item community-centered subscale was .92. The mean of the corrected item-total correlations was .59 (SD = .05). As a result of the factor and reliability analyses, the final ADI included 36 items (see Table 1).

Relationship of Participants' ADI Perceptions
to Their Demographic Characteristics

There was no statistically significant relationship between participants' perceptions of their commitment to the dispositions of effective school leaders on both the student-centered and community-centered subscales and their age, years of experience in the field of education, or years of experience in their current role (see Table 2). Likewise, there was no statistically significant relationship between participants' percep-

Table 1
Administrator Dispositions Index Items with Factor Loadings

ADI Subscale	Factor Loading	
Student-Centered Subscale	*Factor 1*	*Factor 2*
1. I believe learning is life-long for me and others. (S2)	.830	.158
2. I believe all students are entitled access to the knowledge, skills, and values needed to become successful adults. (S1)	.723	.221
3. I believe there are a variety of ways in which students can learn. (S2)	.675	.289
4. I believe a safe and supportive learning environment is essential. (S2)	.671	.341
5. I believe schools should prepare students to be contributing members of society. (S2)	.654	.258
6. I believe administrators should work with faculty, staff, and students to develop a caring school community. (S5)	.630	.392
7. I am committed to the right of every child to a quality education. (S5)	.625	.273
8. I believe schools must hold high standards of learning. (S1)	.604	.365
9. I believe schools are an integral part of the larger community. (S4)	.602	.345
10. I believe there are a variety of ways in which teachers can teach. (S2)	.595	.243
11. I am committed to high-quality standards, expectations, and performances. (S3)	.560	.338
12. I am committed to ethical principles in the decision-making process. (S5)	.525	.382
13. I am committed to the principles stated in the Bill of Rights. (S5)	.500	.278
14. I believe student learning is the fundamental purpose of schooling. (S2)	.491	.285
15. I believe one should accept the consequences for upholding one's principles and actions. (S5)	.490	.324
16. I believe all people can learn. (S1)	.487	.260
17. I believe education is the key to opportunity and social mobility. (S6)	.479	.328
Community-Centered Subscale	*Factor 1*	*Factor 2*
1. I express verbal and/or non-verbal recognition of feelings, needs, and concerns of others. (S6)	.208	.633
2. I am committed to collaboration and communication with families. (S4)	.339	.630
3. I communicate necessary information to the appropriate persons in a timely manner. (S6)	.190	.616

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Table 1 (continued)

ADI Subscale	Factor Loading	
Community-Centered Subscale	*Factor 1*	*Factor 2*
4. I deal appropriately and tactfully with people from different backgrounds. (S6)	.349	.613
5. I generate enthusiasm and work to influence others to accomplish common goals. (S1)	.325	.581
6. I believe in the involvement of stakeholders in management processes. (S3)	.251	.567
7. I motivate others to change behaviors that inhibit professional and organizational growth. (S2)	.249	.566
8. I acknowledge achievement and accomplishment of others. (S1)	.257	.563
9. I continuously do the work required for high levels of performance for myself and the organization. (S1)	.329	.563
10. I respond in a timely manner to others who initiate contact with me. (S6)	.137	.540
11. I believe administrators should develop alliances and/or resources outside the school that improve the quality of teaching and learning. (S6)	.347	.534
12. I am committed to the inclusion of all members of the school community. (S1)	.331	.522
13. I believe it is important to dialogue with other decision-makers affecting education. (S6)	.362	.520
14. I am committed to an informed public. (S4)	.369	.507
15. I anticipate responses of others and act to reduce negative impact. (S6)	.246	.504
16. I believe families are partners in the education of their children. (S4)	.373	.468
17. I believe diversity brings benefits to the school community. (S2)	.388	.464
18. I believe in mobilizing community resources to benefit children. (S4)	.309	.460
19. I believe administrators must take risks to improve schools to make them safer and more efficient and effective. (S3)	.356	.414

Note. After each item the corresponding Standard is specified, such as S1 for Standard 1. Items were developed from the following sources: the Council of Chief State School Officers (2003) and the National Association of Secondary School Principals (2001).

tions of their commitment to the dispositions of effective school leaders on both the student-centered and community-centered subscales and their gender, position, school type, educational role, or school level (see

Table 2
Pearson Product-Moment Correlation Coefficients
between Demographic Variables and the ADI Subscales

ADI Subscale		Age	Years of Experience in Education	Years in Current Role
Student-Centered	r	.090	.054	.033
	p	.124	.358	.577
	n	295	291	295
Community-Centered	r	.101	.082	.008
	p	.084	.165	.891
	n	295	291	295

Tables 3, 4, and 5). There was no statistically significant relationship between participants' perceptions of their commitment to the dispositions of effective school leaders on the student-centered subscale and their school district classification (see Table 6). However, there was a statistically significant relationship between participants' perceptions of their commitment to the dispositions of effective school leaders on the community-centered subscale and their school district classification (see Table 6). Follow-up Tukey pairwise comparison tests indicated that

Table 3
Means, Standard Deviations,
and t-tests for the ADI Subscales by Demographic Variables

ADI Subscale	M	SD	t	df	p
Student-Centered Subscale					
Male (n = 91)	4.85	0.44			
Female (n = 206)	4.85	0.19	0.028	295	.978
Graduate Student (n = 52)	4.87	0.18			
Administrator (n = 249)	4.85	0.31	0.459	299	.646
Public (n = 273)	4.85	0.29			
Private (n = 22)	4.83	0.26	0.275	293	.784
Community-Centered Subscale					
Male (n = 91)	4.59	0.51			
Female (n = 206)	4.53	0.34	1.173	295	.242
Graduate Student (n = 52)	4.57	0.38			
Administrator (n = 249)	4.54	0.40	0.570	299	.569
Public (n = 273)	4.54	0.41			
Private (n = 22)	4.57	0.33	-0.314	293	.754

Table 4
Means, Standards, and ANOVAs
for the ADI Subscales by Educational Role

ADI Subscale	M	SD	F	df	p
Student-Centered					
Teacher ($n = 43$)	4.86	0.19			
Department Chair ($n = 2$)	4.94	0.00			
Dean of Students ($n = 2$)	4.97	0.04			
Assistant Principal ($n = 3$)	4.86	0.24			
Principal ($n = 153$)	4.87	0.19			
Director ($n = 1$)	4.71				
Superintendent ($n = 78$)	4.80	0.47			
Other ($n = 15$)	4.92	0.09	0.702	7, 289	.670
Community-Centered					
Teacher ($n = 43$)	4.52	0.42			
Department Chair ($n = 2$)	4.68	0.15			
Dean of Students ($n = 2$)	4.66	0.04			
Assistant Principal ($n = 3$)	4.60	0.57			
Principal ($n = 153$)	4.59	0.33			
Director ($n = 1$)	4.42				
Superintendent ($n = 78$)	4.43	0.50			
Other ($n = 15$)	4.73	0.23	1.815	7, 289	.084

school leaders from the largest districts with 850 to 1,950 students were significantly more committed to the community-centered dispositions than school leaders from districts with 85 to 239 students ($p = .001$) and less than 85 students ($p = .005$) (smallest districts).

Discussion

Reliability and Validity of the ADI

The results of this study indicate that the dispositions of effective school leaders can be assessed with an acceptable degree of reliability and validity. The reliability coefficients for the two ADI subscales were .92, indicating that participants were consistent in their responses to the ADI items. The item development phase and the content validity procedures ensured that the ADI measured the dispositions of effective school leaders as specified in the Standards for Advanced Programs in Educational Leadership (National Policy Board for Educational Administration, 2002). The results of the factor analysis indicated that the ADI measures a student-centered dimension and a community-centered dimension,

Table 5
Means, Standards, and ANOVAs for the ADI Subscales by School Level

ADI Subscale	M	SD	F	df	p
Student-Centered					
Elementary ($n = 86$)	4.90	0.16			
Middle/Junior High ($n = 25$)	4.84	0.21			
High School ($n = 70$)	4.84	0.21			
K-8 ($n = 12$)	4.90	0.12			
K-12 ($n = 50$)	4.84	0.20			
Central Office ($n = 51$)	4.79	0.57	1.123	5, 288	.348
Community-Centered					
Elementary ($n = 86$)	4.64	0.30			
Middle/Junior High ($n = 25$)	4.47	0.42			
High School ($n = 70$)	4.56	0.37			
K-8 ($n = 12$)	4.63	0.35			
K-12 ($n = 50$)	4.46	0.32			
Central Office ($n = 51$)	4.46	0.59	2.250	5, 288	.050

which provides evidence of construct validity. The results of the correlation analyses, *t*-tests, and ANOVAs indicated that the participants' perceptions of their commitment to the dispositions of effective school leaders were not dependent on their age, gender, position, school type, educational role, school level, years of experience in the field of education, or years of experience in their current role. There was a statistically significant relationship between participants' perceptions of their commitment to the dispositions of effective school leaders on the community-centered subscale and their school district classification with school leaders from the largest districts more committed to the community-centered dispositions than school leaders from the smallest districts. Perhaps, school leaders from the largest districts must make formal efforts to connect with the community while school leaders from the smallest districts are already an integral part of the community.

Conclusion

This study indicates that the ADI is a reliable and valid instrument for measuring the dispositions of effective school leaders. University programs have traditionally taught and assessed the knowledge and skills of administrator candidates through the use of observations and

Table 6
Means, Standards, and ANOVAs
for the ADI Subscales by School District Classification

ADI Subscale	M	SD	F	df	p
Student-Centered					
Student Enrollment					
850 to 1,950 (n = 86)	4.91	0.14			
240 to 849 (n = 39)	4.88	0.20			
85 to 239 (n = 83)	4.81	0.46			
less than 85 (n = 67)	4.82	0.21	2.057	3, 271	.106
Community-Centered					
Student Enrollment					
850 to 1,950 (n = 86)	4.68	0.32			
240 to 849 (n = 39)	4.62	0.36			
85 to 239 (n = 83)	4.44	0.49			
less than 85 (n = 67)	4.46	0.38	6.844	3, 271	<.0005

criterion-referenced and standardized tests. Because dispositions involve human behavior, teaching and assessing dispositions bring about new challenges. In the area of dispositions, awareness and self-reflection are essential to the learning process and to determining one's own growth. The ADI has many potential uses for administrator preparation programs. First, by completing the ADI early in their administrator preparation program and at several points over the course of the program, candidates may become increasingly aware of the dispositions of effective school leaders and may be able to reflect upon, observe, and practice these dispositions throughout the administrator preparation process. As one participant who is a practicing administrator wrote after completing the ADI, "all of the statements reflect positive dispositions and reviewing them gave me a chance to self-evaluate and focus my intentions." Second, opportunities to practice the dispositions of effective school leaders from the ADI could be integrated into the curricula of administrator preparation programs so that the dispositions are reflected in the behavior of administrator candidates. Another participant who is a practicing administrator wrote, "I do believe that effective administrators function with these dispositions as so ingrained, and such integral parts of who they are, that most times we don't consciously articulate these beliefs."

Finally, the ADI gives administrator candidates, faculty, and supervisors working with administrator candidates a reliable and valid instrument to provide an assessment of and a means to communicate the

dispositions of effective school leaders. As one practicing administrator concluded, "Effective, successful school administrators, as well as all educators, approach their role within the school with a passion for it, rather than as a 'job.' Our students and our staffs recognize the difference immediately."

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